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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DAY, HERNG DER

ART UNIT	PAPER NUMBER
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2128

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/333,379

Applicant(s)

HAGENBUCH ET AL.

Examiner

Herng-der Day

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-26,28-36,38 and 52-87 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-26,28-36,38, and 52-87 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 March 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/17/06.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to Applicants' Amendment ("Amendment") to Office Actions dated July 17, 2006, filed October 17, 2006.

1-1. Claims 1, 21, 31, 52, 60-65, 68, 70, 73, 78-79, and 82 have been amended. Claims 1-7, 9-26, 28-36, 38, and 52-87 are pending.

1-2. Claims 1-7, 9-26, 28-36, 38, and 52-87 have been examined.

Drawings

2. The drawings received by on March 13, 2006, are objected to for the following reasons. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the Examiner, the Applicants will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2-1. Figures 1-3 and 21-22 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Claim Objections

3. Claim 21 is objected to because of the informality as described in line 10 of the claim, i.e., “to a desired volumetric capacity-of the vehicle” (Emphasis added). Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 64-72 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for making a body of a vehicle, does not reasonably provide enablement for making a container. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

5-1. Claims 64-72 are directed to a process of making a container which does not appear to have support in the original disclosure. The specification discloses a process for making a body of a vehicle. However, no information has been disclosed regarding the claimed container. For example, it is unclear about the container's material, shape, opening, etc.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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7. Claims 1-7, 9-26, 28-36, 38, 52-63, 73-77, and 82-87 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7-1. Claims 1, 21, 31, 52, and 60 recite the limitation “producing the body in accordance with the set of design parameters” at the end of each claim. It is unclear whether “the set of design parameters” refers to the set of original design parameters or the set of adjusted design parameters. For the purpose of claim examination, the Examiner will presume that “the set of design parameters” as described at the end of claims 1, 21, 31, 52, and 60 refers to the set of adjusted design parameters.

7-2. Claim 73 recite the limitation “(c) producing the body” in line 10 of the claim. It does not appear the producing step needs any relationship with other steps. In other words, step (a) and (b) do not appear being necessary to complete the intended process of making a body.

7-3. Claim 82 recite the limitation “where the heaped load includes angles of repose derived from the collected data” in lines 6-7 of the claim. It is unclear whether “the heaped load” refers to the actual heaped load or the modeled heaped load. For the purpose of claim examination, the Examiner will presume that “the heaped load” as described in line 6 of claim 82 refers to the modeled heaped load.

7-4. Claims not specifically rejected above are rejected as being dependent on a rejected claim.

Recommendations

8. Claim 1 recites the limitation “angles of repose” in lines 5 and 8 of the claim. For clarification purposes, the Examiner suggests that “angles of repose” be replaced with “angles of material repose”.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-7, 12, 19, 21-26, 29, 60-62, and 78-83 are rejected under 35 U.S.C. 102(e) as being anticipated by Hagenbuch, U.S. Patent 5,887,914 issued March 30, 1999.

10-1. Regarding claim 1, Hagenbuch discloses a process for making a body of a vehicle for hauling material having a front wall, a pair of sidewalls and a rear edge, the process comprising:

(a) determining heaping characteristics of material to be hauled at the vehicle's anticipated point of use, including at least angles of repose in three dimensions (the density of the overburden or heavy material is calculated and the natural slope of the heaped overburden or heavy material is determined, column 9, lines 46-49);

(b) developing a three dimensional model of a load to be carried in the body on a chassis using the angles of repose (a profile of a full load is added ... the width of the body is also adjusted, column 9, lines 49-58);

(c) adjusting a set of design parameters of the body until a center of gravity of the model is located proximate a desired location for a load center of gravity on the chassis and a volume of the three dimensional model is substantially similar to a desired volumetric capacity (The slope angles and lengths of the floor 25 and front slope 23 are adjusted ... in order to locate the center of gravity for the full load close to the center of gravity contemplated in the design of the chassis 15, column 9, lines 49-58); and

(d) producing the body in accordance with the set of design parameters (producing the body, column 12, lines 28-29).

10-2. Regarding claim 2, Hagenbuch further discloses wherein the set of design parameters of the body includes a position of the body floor and a position of the body sidewalls (lengths of the floor 25, column 9, lines 49-58; STEP 8, adjust the body side height, FIG. 11B).

10-3. Regarding claim 3, Hagenbuch further discloses wherein the position of the body floor includes a length of the floor (lengths of the floor 25, column 9, lines 49-58).

10-4. Regarding claim 4, Hagenbuch further discloses wherein the position of the body sidewalls includes a height of the sidewalls (STEP 8, adjust the body side height, FIG. 11B).

10-5. Regarding claim 5, Hagenbuch further discloses wherein the position of the body sidewalls further includes a distance between the respective sidewalls (the width of the body, column 9, lines 55-58).

10-6. Regarding claim 6, Hagenbuch further discloses wherein the set of design parameters of the body further includes a position of the body front wall (STEP 4, Established proposed front slope line, FIG. 9B).

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10-7. Regarding claim 7, Hagenbuch further discloses including the step of adjusting a length of the body floor and the height of the body sidewalls to provide the lowest practical vertical location for the center of gravity of the three dimensional volumetric model of the hauled material (Minimizing the height of the load lowers the center of gravity of the load, column 9, lines 55-68).

10-8. Regarding claim 12, Hagenbuch further discloses wherein the heaping characteristics of material to be hauled at the anticipated point of use further includes a density of the material (the density of the overburden or heavy material is calculated, column 9, lines 46-49).

10-9. Regarding claim 19, Hagenbuch further discloses including adjusting the set of design parameters to provide the lowest practical vertical location for the center of gravity of the three dimensional model of the hauled material (Minimizing the height of the load lowers the center of gravity of the load, column 9, lines 55-68).

10-10. Regarding claim 21, Hagenbuch discloses a process for making a body of a vehicle for hauling material having a front wall, a pair of sidewalls and a rear edge, the process comprising:

(a) developing a three-dimensional model of a load to be carried in the body on a chassis (a profile of a full load is added ... the width of the body is also adjusted, column 9, lines 49-58), where the model incorporates angles of material repose in three dimensions for an actual load at an anticipated point of use (the natural slope of the heaped overburden or heavy material is determined, column 9, lines 46-49);

(b) adjusting a set of design parameters of the body until the load model center of gravity is located proximate a desired location for a load center of gravity on a chassis of the vehicle and the volume of the three-dimensional model is substantially similar to a desired volumetric

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capacity of the vehicle (The slope angles and lengths of the floor 25 and front slope 23 are adjusted ... in order to locate the center of gravity for the full load close to the center of gravity contemplated in the design of the chassis 15, column 9, lines 49-58); and

(c) producing the body in accordance with the set of design parameters (producing the body, column 12, lines 28-29).

10-11. Regarding claim 22, Hagenbuch further discloses wherein the set of design parameters of the body includes a position of the body floor and a position of the body sidewalls (lengths of the floor 25, column 9, lines 49-58; STEP 8, adjust the body side height, FIG. 11B).

10-12. Regarding claim 23, Hagenbuch further discloses wherein the position of the body floor includes a length of the floor (lengths of the floor 25, column 9, lines 49-58).

10-13. Regarding claim 24, Hagenbuch further discloses wherein the position of the body sidewalls includes a height of the sidewalls (STEP 8, adjust the body side height, FIG. 11B).

10-14. Regarding claim 25, Hagenbuch further discloses wherein the position of the body sidewalls further includes a distance between the respective sidewalls (the width of the body, column 9, lines 55-58).

10-15. Regarding claim 26, Hagenbuch further discloses wherein the set of design parameters of the body further includes a position of the body front wall (STEP 4, Established proposed front slope line, FIG. 9B).

10-16. Regarding claim 29, Hagenbuch further discloses including adjusting the set of design parameters to provide the lowest practical vertical location for the center of gravity of the three dimensional model of the hauled material (Minimizing the height of the load lowers the center of gravity of the load, column 9, lines 55-68).

10-17. Regarding claim 60, Hagenbuch discloses a process of making a body of a vehicle for hauling material comprising:

(a) developing a three dimensional model of a load to be carried in the body (a profile of a full load is added ... the width of the body is also adjusted, column 9, lines 49-58) from information describing heaping characteristics of material to be hauled at the vehicle's anticipated point of use (the density of the overburden or heavy material is calculated and the natural slope of the heaped overburden or heavy material is determined, column 9, lines 46-49);

(b) adjusting a set of design parameters of the body until a volume of the three dimensional model is substantially similar to a desired volumetric capacity (The slope angles and lengths of the floor 25 and front slope 23 are adjusted, column 9, lines 49-58); and

(c) producing the body in accordance with the set of design parameters (producing the body, column 12, lines 28-29).

10-18. Regarding claim 61, Hagenbuch further discloses where the set of design parameters includes one or more of (1) a position of a floor of the body, (2) a position of sidewalls of the body (3) a length of the floor, (4) a height of the sidewalls, (5) a distance between the sidewalls and (6) a position of a front wall of the body (for example, FIG. 9A, body floor line).

10-19. Regarding claim 62, Hagenbuch further discloses including adjusting the set of design parameters to locate a center of gravity of material held in the body at approximately a lowest possible position for the center of gravity (Minimizing the height of the load lowers the center of gravity of the load, column 9, lines 55-68).

10-20. Regarding claim 78, Hagenbuch discloses a process of making a body of a haulage vehicle comprising:

(a) modeling a shape of a load of heaped material in three dimensions, where the shape is substantially conical and the modeling incorporates information about angles of repose for a particular heaped material to be hauled by the vehicle (FIG. 10B, loaded 2:1 heap);

(b) modeling a body to hold the substantially conically shaped load of the material, where a shape of the body is defined by predetermined parameters (FIG. 10A); and

(c) producing the body according to values of the predetermined parameters resulting from the modeling of the body (FIG. 14A and 14B).

10-21. Regarding claim 79, Hagenbuch further discloses the predetermined parameters include one or more of (1) a position of a floor of the body, (2) a position of sidewalls of the body (3) a length of the floor, (4) a height of the sidewalls, (5) a distance between the sidewalls and (6) a position of a front wall of the body (for example, FIG. 9A, body floor line).

10-22. Regarding claim 80, Hagenbuch further discloses adjusting the predetermined parameters to locate a center of gravity of material held in the modeled body that approximates a lowest possible location (FIG. 14B, step 8e).

10-23. Regarding claim 81, Hagenbuch further discloses adjusting the predetermined parameters to allow material to be loaded into the modeled body from a lowest practical vertical elevation over a floor of the body (FIG. 14A, step 3, minimum distance above chassis).

10-24. Regarding claim 82, Hagenbuch discloses a process of making a body of a haulage vehicle for hauling particular material comprising:

(a) collecting data describing heaping characteristics of the particular material in three dimensions (the density of the overburden or heavy material is calculated and the natural slope of the heaped overburden or heavy material is determined, column 9, lines 46-49);

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(b) modeling in three dimensions a heaped load of the material to be carried in a body of the haulage vehicle, where the heaped load includes angles of repose derived from the collected data (a profile of a full load is added ... the width of the body is also adjusted, column 9, lines 49-58); and

(c) producing the body to hold the heaped load of the material (producing the body, column 12, lines 28-29) such that when the body is mounted on the haulage vehicle and filled with an actual heaped load of the material the centroid of the actual heaped load is located proximate a predetermined location over a chassis of the haulage vehicle (to locate the center of gravity for the full load close to the center of gravity contemplated in the design of the chassis 15, column 9, lines 49-58).

10-25. Regarding claim 83, Hagenbuch further discloses wherein the modeling of the heaped load in three dimensions includes modeling as a conical shape a section of the heaped load extending above the body, where the conical shape incorporates the angles of repose derived from the collected data (FIG. 10B; the natural slope of the heaped overburden or heavy material is determined, column 9, lines 46-49).

Applicants' Arguments

11. Applicants argue the following:

12-1. THE PRIOR ART REJECTION OF PARAGRAPH 8

(1) "In this amendment, applicant has changed the format of the claims from product-by-process to just a process." (Page 17, paragraph 3, Amendment).

11-2. THE OBJECTION TO THE FORM OF CLAIM 82 IN PARAGRAPH 3

(2) "Claim 82 has been re-written without amendment so that each element starts on a new line." (Page 17, paragraph 4, Amendment).

11-3. THE SECTION 112 REJECTIONS OF PARAGRAPHS 4 AND 5

(3) "Applicant has amended all of the claims identified in paragraph 5 of the Office action to address the rejection for insufficient antecedent basis." (Page 18, paragraph 1, Amendment).

11-4. THE PRIOR ART REJECTIONS OF PARAGRAPH 7

(4) "Although the '914 patent teaches different heaping characteristics for these different materials (e.g., Figs. 11C), it does not rely on these heaping characteristics to create a three-dimensional model of the load of material, which is an express requirement of the claims 78-81. Instead, the '914 patent uses only two-dimensional "profile" heaping angles to size the body to the load." (Page 18, paragraph 3, Amendment).

(5) "Thus nothing in the '914 patent discloses or suggests using the characteristic of the particular material to be hauled in creating a model of the load." (Page 18, paragraph 4, Amendment).

(6) "there is still nothing in the '914 patent that teaches or suggests modeling the load in three dimensions as part of the process of making a body, which is expressly required in claims 78-81." (Page 18, paragraph 5 through page 19, paragraph 1, Amendment).

11-5. CORRECTED DRAWINGS REQUIREMENT

(7) "Contrary to the Office action's assertions, drawing figures 1-3, 21 and 22 are not merely illustrations of the prior art and labels so indicating would be wrong or at least confusing." (Page 19, paragraph 2, Amendment).

Response to Arguments

12. Applicants' arguments have been fully considered.

12-1. Applicants' argument (1) is persuasive. The rejections of claims 1-7, 9-26, 28-36, 38, and 52-87 under 35 U.S.C. 102(e) in Office Action dated July 17, 2006, have been withdrawn.

12-2. Applicants' argument (2) is persuasive. The objection of claim 82 in Office Action dated July 17, 2006, has been withdrawn.

12-3. Applicants' argument (3) is persuasive. The rejections of claims 1-7, 9-26, 28-36, 38, 52-59, 61-63, 65, 70, 79, and 83 under 35 U.S.C. 112, second paragraph, in Office Action dated July 17, 2006, have been withdrawn.

12-4. Applicants' arguments (4) - (6) are not persuasive. As disclosed by the prior art Patent No. 5,887,914 at column 9, lines 46-67, "In steps A and B of FIG. 10A, the density of the overburden or heavy material is calculated and the natural slope of the heaped overburden or heavy material is determined--e.g., 2:1, meaning a slope of approximately 26 degrees. With the density and natural slope of the heap for a load of overburden, a profile of a full load is added in FIG. 10B. The slope angles and lengths of the floor 25 and front slope 23 are adjusted as indicated by the arrows in order to locate the center of gravity for the full load close to the center of gravity contemplated in the design of the chassis 15. Using an iterative process, the width of the body is also adjusted with the slopes and lengths of the floor 25 and front slope 23 in order to minimize the height of the profile for a full load. Minimizing the height of the load lowers the center of gravity of the load and thereby helps the stability of the vehicle. Obviously, the wider the body, the lower the center of gravity. As a practical limit, however, the body should not be

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significantly wider than the overall width of the rear axle measured from the outer edges of the tires. As indicated by step C in FIG. 10A, applicant has typically adjusted the width of the body to be approximately 100-115 percent of the overall rear axle tire width.” First, because “the density is calculated”, it relates to an existing particular material is obviously suggested. Next, “Using an iterative process, the width of the body is also adjusted with the slopes and lengths of the floor 25 and front slope 23 in order to minimize the height of the profile for a full load” suggests that although the profile is two dimensional, the third dimension (i.e., the width) is also iteratively adjusted. Therefore, as a whole, it represents a three dimensional model.

Furthermore, when the particular heaped material has the characteristics of, for example, a 2:1 heap, which has not been excluded from the claim, the prior art anticipates the claimed limitations.

12-5. Applicants’ argument (7) is not persuasive. Figures 1-3 illustrate steps 2-4, which have been disclosed and taught in U.S. Patent No. 5,887, 914. Figures 21 and 22 show an existing loaded off-highway truck. Applicants are encouraged to particularly point out the subject matter which applicant regards as the instant invention for those existing loaded off-highway trucks.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Herng-der Day whose telephone number is (571) 272-3777. The Examiner can normally be reached on 9:00 - 17:30.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: (571) 272-2100.

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If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kamini S. Shah can be reached on (571) 272-2279. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Herng-der Day

March 20, 2007

H.D.


KAMINI SHAH
SUPERVISORY PATENT EXAMINER